Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

1 1. (Currently Amended) A method for jointly adapting power and data transmission rate in a
2 wireless network, comprising:
3   setting a transmission rate for a mobile station;
4   measuring a signal quality for the mobile station;
5   adjusting, if necessary, a transmission power level towards a power control target
6 associated with the transmission rate; [[and]]
7   adjusting, if necessary, the transmission rate for the mobile station based upon signal
8 quality measured over a period of time;
9   determining an average signal quality level over the period of time;
10   incrementing a rate adaptation counter if the average signal quality is greater than or
11 equal to a predetermined low threshold for the transmission rate;
12   decrementing the rate adaptation counter if the average signal quality is less than the
13 predetermined low threshold for the transmission rate;
14   updating the transmission rate based upon the rate adaptation counter;
15   updating the transmission rate for a next frame; and
16   updating the next frame transmission to a minimum of the transmission rate plus a first
17 predetermined amount and a maximum supported transmission rate based upon a comparison of
18 a value in the rate adaptation counter and a predetermined up threshold.
19
20 2. (Original) The method according to claim 1, further including decreasing the transmission
21 power by a first down amount if the measured signal quality is less than the power control target.
22
23 3. (Original) The method according to claim 2, further including increasing the transmission
24 power by a first up amount if the measured signal quality is greater than the power control target.

1   4. (Original) The method according to claim 3, further including maintaining the transmission

2   power at its current level if the measured signal quality is not less than or greater than the power

3   control target.

4

5   5. (Canceled)

6

7   6. (Currently Amended) The method according to claim [[5]] 1, wherein the period of time

8   corresponds to a frame and the average signal quality corresponds to an average SINR level.

9

10   7. (Canceled)

11

12   8. (Canceled)

13

14   9. (Currently Amended) The method according to claim [[5]] 1, further including updating the

15   transmission rate based upon the average signal quality.

16

17   10. (Canceled)

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19   11. (Canceled)

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21   12. (Canceled)

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23   13. (Currently Amended) The method according to claim [[12]] 1, further including updating

24   the transmission rate to a maximum of the current transmission rate minus a second

25   predetermined amount and a predetermined minimum transmission rate.

26

27   14. (Currently Amended) The method according to claim [[11]] 1, further including delaying

28   data transmission to the mobile station by setting the transmission rate to zero.

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1   15. (Currently Amended) The method according to claim [[12]] 1, further including

2   maintaining the current transmission rate based upon the value in the adaptation counter.

3

4   16. (Original) The method according to claim 15, further including repeating the measuring of

5   signal quality, the updating of the transmission rate, and adjusting the transmission power.

6

7   17. (Original) A method for adapting transmission power and transmission rate in a wireless

8   network, comprising:

9   measuring a link quality of a first link in the wireless network;

10   decreasing a current transmission power for the first link if the measured link quality is

11   greater than a target link quality associated with a current transmission rate;

12   increasing the current transmission power for the first link if the measured link quality is

13   less than the target link quality associated with the current transmission rate;

14   maintaining the current transmission power for the first link if the measured link quality

15   is not less than or greater than the link quality associated with the current transmission rate;

16   determining an average link quality measure at predetermined intervals;

17   incrementing or decrementing a counter value based upon a comparison of the average

18   link quality measure and a predetermined threshold; and

19   increasing or decreasing the current transmission rate for a next one of the predetermined

20   intervals.

21

22   18. (Original) The method according to claim 17, wherein the predetermined intervals

23   correspond to frames.

24

25   19. (Original) The method according to claim 17, further including incrementing, decrementing

26   or maintaining the current transmission rate for the next one of the predetermined intervals.

27

28   20. (Original) The method according to claim 17, further including selecting delaying

29   transmission to a user by setting the current transmission rate for the next of the predetermined

30   intervals to zero.